REMARKS

By Office Action mailed June 30, 2003, all pending claims stood rejected, reconsideration of which is respectfully requested in view of the above amendments and following remarks. Claims 1-17 have been cancelled. New claims 18-26 have been added. Claims 18-26 are now pending.

Amendments to the Specification

As an initial matter, Applicants have amended the specification to add the seven new paragraphs set forth above. These new paragraphs merely paraphrase the text of claims 1-17, as originally filed, and do not constitute addition of new matter.

Amendments to the Claims

As set forth above, Applicants have cancelled claims 1-17 and have added new claims 18-26. Support for claims 18-26 may be found generally throughout the specification and originally filed claims, and in particular, in Figures 2-4 and 7, the corresponding description of such Figures at page 6, line 23 through page 8, line 4 and page 9, lines 5-18, and originally filed claims 1, 3, 5 and 10-17. Again, Applicants submit that no new matter has been added by way of these new claims.

Rejection Under 35 U.S.C. § 102(e)

Claims 1-17 were rejected under 35 U.S.C. § 102(e) as anticipated by Weigl et al. (U.S. Patent No. 6,171,865). By way of this Amendment, Applicants have cancelled claims 1-17. Accordingly, Applicants submit that this ground of rejection has been obviated.

In addition, with respect to new claims 18-26, Applicants submit that Weigl does not teach or suggest a method for generating a concentration gradient in a microfluidic channel as recited in new claims 18-26.

Rather, Weigl is directed to a method for detecting the presence or determining the concentration of analyte particles in a sample stream. As noted by the Examiner, such method comprises flowing a first fluid comprising a diffusible constituent (such as a sample

stream comprising analyte particles) through a first inlet into a microfluidic channel and flowing a second fluid (such as an indicator stream comprising an indicator substance) through a second inlet into the same microfluidic channel, thereby providing a diffusion interface between the first and second fluids. As noted by Weigl, as the first and second fluids flow through the microfluidic channel, the diffusible constituent (*i.e.*, the analyte particles) will diffuse across the diffusion interface into the second fluid, thereby providing a detection area.

Although the method recited in new claim 18 also comprises providing a microfluidic channel having a first inlet and a second inlet, introducing a first fluid containing a diffusible constituent into the first inlet, and introducing a second fluid into the second inlet, claim 18 further recites, *inter alia*:

> "flowing the first and second fluids through the microfluidic channel in parallel laminar flow such that the diffusible constituent diffuses between the first fluid and the second fluid *to form a combined solution which has a uniform composition across the width of the microfluidic channel*; and
>
> varying the flow rate of the first fluid, the second fluid or both the first and second fluids such that *the concentration of the diffusible constituent in the combined solution varies along the length of the microfluidic channel*." (Emphasis added.)

Weigl does not disclose a method comprising either of these two additional steps. In particular, Weigl does not disclose forming a combined solution which has a uniform composition across the width of the microfluidic channel. To the contrary, Weigl discloses configuring the microfluidic channel to control which particles diffuse between the sample and indicator streams, namely, to provide for the diffusion of the analyte particles only (*see, e.g.*, column 20, line 64 through column 21, line 12).

Accordingly, in view of the foregoing, Applicants submit that Weigl does not disclose every element of new claim 18. Furthermore, there is no teaching or suggestion in Weigl to modify the method disclosed therein to achieve the claimed method of the present invention.

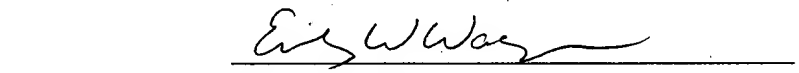
As for dependent claims 19-26, since these claims are dependent from, and thus contains all the limitations of claim 18, they are patentable for the same reasons as set forth above.

In view of the above amendment and remarks, allowance of claims 18-26 is respectfully requested. A good faith effort has been made to place this application in condition for allowance. However, should any further issue require attention prior to allowance, the Examiner is requested to contact the undersigned at (206) 622-4900 to resolve the same. Furthermore, the Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

C. Frederick Battrell et al.

SEED Intellectual Property Law Group PLLC



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